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WHAT IS CLAIMED IS:

1. A plant-growing apparatus comprising:
 - 5 (a) a plurality of rotatable plant-growing modules, each said module comprising a cylindrical structure for holding plant-growing containers, such that said plants grow in said containers radially inwardly of said cylindrical structure toward a light source inside said cylindrical structure and
10 roots of said plants grow radially outwardly of said cylindrical structures;
 - (b) module support means for supporting each said module and for rotating each said module about its longitudinal axis in a
15 substantially horizontal position;
 - (c) module moving means for conveying said module support means and modules along a path between two separated positions; and
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 - (d) water-feeding means for feeding water to said plants.
2. An apparatus according to claim 1 wherein said two separated
25 positions are a vertically higher position and a vertically lower position.
3. An apparatus according to claim 1 wherein said two separated positions are two horizontally separated positions.

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4. An apparatus according to claim 2 wherein said water feeding means is a trough in which said plant-growing containers are brought into contact with water at said vertically lower position.
- 5 5. An apparatus according to claim 1 wherein said water feeding means is a trough supported on said module support means for watering said plants as said module rotates.
- 10 6. An apparatus according to claim 1 wherein said module moving means comprises a plurality of sprocket wheels and an endless chain.
- 15 7. An apparatus according to claim 1 wherein said module support means comprises a pair of spaced-apart rotatable members.
8. An apparatus according to claim 7 wherein said cylindrical structures have rims adapted to engage said rotatable members.
- 20 9. A method of growing plants comprising the steps of:
 - (a) placing plant material in a growing medium;
 - (b) placing said medium in a rotatable growing apparatus such that plants grow radially inwardly of said apparatus toward a light;
 - 25 (c) illuminating a light source in said rotatable growing apparatus;
 - 30 (d) rotating said rotatable growing apparatus about said light source;

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- (e) moving said rotatable growing apparatus along a path between two separated positions; and
- (f) delivering water to said growing medium.

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- 10. A method according to claim 9 wherein said two separated positions are a vertically higher position and a vertically lower position.
- 10 11. A method according to claim 9 wherein said two separated positions are two horizontally separated positions.